## REMARKS

This application has been carefully reviewed in light of the Office Action dated May 6, 2005. Claims 1 to 63 are pending in the application. Claims 1, 10, 26 and 35 are in independent form. Reconsideration and further examination are respectfully requested.

Applicant thanks the Examiner for the indication that Claims 5, 8, 14, 17, 19 to 24, 30, 33, 39, 42 and 44 to 49 would be allowable if rewritten in independent form, including all of the limitations of the base claims. Applicant has chosen not to rewrite these claims at this time since the base claims for each of Claims 5, 8, 14, 17, 19 to 24, 30, 33, 39, 42 and 44 to 49 are believed to be allowable for at least the reasons set forth below.

The specification was objected to for alleged informalities. More specifically, it was requested that section headings be inserted into the specification. In response, Applicant has amended the specification to include section headings. Reconsideration and withdrawal of this objection are respectfully requested.

Claims 1 to 4, 6, 7, 9 to 13, 15, 16, 18, 24 to 29, 31, 32, 34 to 38, 40, 41, 43 and 50 to 63 were rejected under 35 U.S.C. § 102(e) over U.S. Patent No. 6,757,343 (Ortega). This rejection is respectfully traversed.

The present invention generally concerns data transformation in which input (or output) signals have even-indexed samples and odd-indexed samples. The even-indexed samples are modified by a function of weighted odd-indexed samples, and the odd-indexed samples may be modified by a function of weighted even-indexed samples. According to one feature of the invention, the weighted samples are obtained by at least one weighting operation applied to (or the weighted samples are supplied by at least one

weighting module which receives as input) a difference between two consecutive even-indexed samples.

Independent Claims 1 and 10 are directed to methods, and independent Claims 26 and 35 are directed to devices.

For example, according to one embodiment of the present invention, page 21, line 15 of the specification discloses that a weighting operation is applied to consecutive even-indexed samples $y_{2n}$ and $y_{2n+2}$ as follows:

$$\forall n, y_{2n+1} = y_{2n+1} + R(\beta_{0,j} \cdot (y_{2n} - y_{2n+2})).$$

It can be seen from this exemplary embodiment that a difference is applied to $y_{2n}$ and $y_{2n+2}$, since the sign of $y_{2n}$ is positive and the sign of $y_{2n+2}$ is negative. Page 5, lines 27 to 29 of the specification further discloses that in a situation where an operation is reversed, for example when changing from an analysis stage to a synthesis stage, the sign before a function is changed. In this exemplary embodiment, changing the sign of function R would still result in applying a difference between $y_{2n}$ and $y_{2n+2}$.

Turning to the rejection, Ortega is not seen to disclose or suggest at least the feature that weighted samples are obtained by at least one weighting operation applied to (or that weighted samples are supplied by at least one weighting module which receives as input) a difference between two consecutive even-indexed samples.

As understood by Applicant, Ortega discloses multilevel wavelet decomposition in which an alpha value is applied to even-indexed samples when updating odd-indexed samples. Ortega discloses that a value $x^0(1)$ is updated into:

$$x^1(1) = x^0(1) + \alpha(x^0(0) + x^0(2)),$$

and that similar updating occurs for samples $\{x^0(3), x^0(5), x^0(7)\}$. See Ortega, Figures 3, 4 and 28; and column 26, line 50 to column 27, line 1. As such, Ortega is seen to teach that

an alpha value is applied to even-indexed samples $x^0(0)$ and $x^0(2)$ that are summed, since both $x^0(0)$ and $x^0(2)$ have the same sign (i.e., a positive sign).

The Office Action took the position that Figures 3 and 4 of Ortega correspond to an analysis stage, and alleged that a difference between two consecutive even-indexed samples occurs at an unarticulated synthesis stage of Ortega. However, as noted in the above exemplary embodiment of the present invention, a reverse operation is seen to change the sign of an applied function. In Ortega, if the sign of the alpha function is changed for a synthesis stage (assuming that such a synthesis stage is actually disclosed in Ortega), $x^0(0)$ and $x^0(2)$ would still both have a negative sign. As such, the signs for $x^0(0)$ and $x^0(2)$ would still be the same, and the synthesis would correspond to a summation, and not a difference, of even-indexed samples. Mathematically, Ortega's Figure 4 might be interpreted to show the equation:

$$\alpha(x_{2n} + x_{2n+2}),$$

and if the equation were reversed, then it would result in the expression:

$$-\alpha(x_{2n} + x_{2n+2})$$

This is still a summation operation, however, and not a difference operation as in the claimed invention, which would indicate an expression more like:

$$\alpha(x_{2n} - x_{2n+2}).$$

Accordingly, Ortega is not seen to disclose or suggest that weighted samples are obtained by at least one weighting operation applied to (or that weighted samples are supplied by at least one weighting module which receives as input) a difference between two consecutive even-indexed samples.

Based on the foregoing amendments and remarks, independent Claims 1, 10, 26 and 35 are believed to be allowable over the applied reference.

The other claims in the application are each dependent from the independent claims and are believed to be allowable over the applied reference for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

Regarding a formal matter, it is respectfully requested to receive an initialed copy of the Form PTO-1449 that was submitted with the Information Disclosure Statement dated April 27, 2005.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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